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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,605	06/03/2005	Bruce P. Swaybill	60,469-219;OT-5094	3567
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CARLSON GASKEY & OLDS 400 W MAPLE STE 350 BIRMINGHAM, MI 48009			EXAMINER KRUEER, STEFAN	
			ART UNIT	PAPER NUMBER
			3654	
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			08/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/537,605	SWAYBILL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Stefan Kruer	3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 3, 6 - 10, 13 - 16 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 3, 6 - 10, 13 - 16 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

**Claim 15** is objected to for repeating a limitation as found in **Claim 16** from which **Claim 15** depends.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

**Claim 7** is rejected under 35 U.S.C. 102(a) as being anticipated by Glassey et al (6,446,763).

**Re: Claim 7**, Glassey et al disclose:

- A machine supporting portion (19, Fig. 1) that secures a machine (20, 21) comprising a motor (20) in a selected position in a hoistway (23);
- A termination supporting portion (32) that secures a plurality of terminations (46, Fig. 2) in a selected position, and
- a sheave supporting portion (26) to support at least one sheave (28), the supporting portions being secured together to form a single structure (Fig. 2) that supports the machine, the termination members and the sheave, the single structure being located inside the hoistway, the machine supporting portion and the sheave supporting portion comprise two lateral beam members (27 and lower, unnumbered) spaced from each other and the termination supporting portion comprises at least one transverse member (26) extending between and secured to the lateral beam members.

In reference to the claim language referring to a support device for a machine-roomless elevator system, intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order

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to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 6 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al (4,807,723) in view of Bauer (US 2002/0185338).

**Re: Claims 1 and 22**, Salmon et al disclose:

- a machine supporting portion (top, center of 14) that secures a machine comprising a motor (10) in a selected position in a hoistway (referenced, Col. 2, Line 19).
- and a sheave supporting portion (top, end of 14) to support at least one sheave; the supporting portions being secured together to form a single structure that supports the machine and the sheave, the single structure being located inside the hoistway.

however, though Salmon et al disclose load-bearing members (20), they are silent regarding a plurality of termination members and their supporting portions each comprising a plurality of metal sheets secured together.

Attention is directed to Bauer who teaches a termination-supporting portion plurality (17, Fig. 1) for securing a plurality of termination members (ends of 16) in a selected position, the termination members being configured to secure an end of associated load-bearing members (16, Para. 0020) near the selected position.

Furthermore, Bauer teaches his supporting portions comprising a plurality of metal sheets secured together (Para. 0017) as "... a frame 15.1 made of sections and a mounting plate 15.2..."

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al with the teaching of Bauer to integrate a termination in the machine-supporting portion as typical of conventional (2:1) rope suspension systems.

**Re: Claim 6**, Salmon et al disclose their machine- and sheave-supporting portions as comprising two lateral beam members (14).

**Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of Bauer, as applied to Claim 1, and in further view of Morris et al (4,537,286).

Salmon et al are silent regarding a termination-supporting portion.

Bauer teaches his first and second termination members (17, Fig. 1 and 19, Fig. 2, respectively) having respective first and second termination-supporting portions, wherein his first terminating supporting portion forms a single structure with his machine supporting portion, sheave and termination members, and said single structure is located inside the hoistway. However, his second termination portion is secured separately of his single structure.

Attention is directed to Morris et al who teach a support device having a large plurality of termination members suspended from termination-support members mounted on overhead beams, machine beams or ... auxiliary beams..." (Col. 3, line 4) of particular benefit for applications utilizing 2:1 suspension (Col. 1, line 11), wherein his termination portion comprises a plurality of metal sheets secured together.

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and Bauer with the teaching of Morris et al to integrate a second termination portion in the machine-supporting portion to accommodate 2:1 rope suspension systems as known in the art for reduction of space and drive capacities.

**Claims 3 and 8 - 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of Bauer, as applied to Claim 1, and in further view of de Jong et al (5,361,873).

**Re: Claim 3**, Salmon et al and Bauer disclose a single sheave-supporting portion.

Attention is directed to de Jong et al who their first and second sheave supporting portions to accommodate additional tensioning for maintaining alignment of suspension ropes within the sheave grooves as well as their displacement.

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and Bauer with the teaching of de Jong et al to provide additional aligning means of suspension ropes for flexibility of installation and smoother operation.

**Re: Claims 8 and 9**, Salmon et al disclose a mounting member near each end of the lateral beam members.

Bauer discloses his mounting member(s) (15.2) in combination with a "... frame (15.1) made of sections... " whereby his mounting member(s) is "... fastened to... rails..." (Para. 0017) that carry a load of the device and associated elevator system components; however, Bauer is silent regarding the details of his frame.

Attention is directed to de Jong et al who teach their device including:

- two spaced lateral beam members (right-left, Fig. 4),
- at least one transverse beam (Fig. 5) extending between and secured to the lateral beam members near each end of the beam members,
- mounting members near each end of each lateral beam member (Fig. 4),
- said mounting members securing the device to a structure that carries a load of the device.
- And a plurality of vertical brace members (raised portions, Fig. 4) connected to each of the mounting members;

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and Bauer with the teaching of de Jong et al to provide an appropriately constructed and secured support-framing structure.

**Claims 10 and 13 - 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of de Jong et al and in further view of Orrman et al (US 2002/0017434).

**Re: Claims 16 and 15**, Salmon et al disclose:

- a machine having a motor (10) and a drive sheave (12) inside a hoistway,
- an idler sheave (16) inside a hoistway,
- an elevator cab ("car"),
- a counterweight ("C.W.")
- a plurality of elongated load bearing members (20) associated with the cab and counterweight, said load bearing members being moveable about the drive sheave and idler sheave in response to operation of the machine;
- a single support device in the hoistway that secures the machine and sheave in a desired position in the hoistway relative to the cab and counterweight;
- the support device includes two lateral beam members (14) that provide support for the machine and the sheave, the lateral beam members are spaced from each other;

however, Salmon et al are silent regarding a plurality of termination members associated with the ends of the load-bearing members, wherein said termination members are secured by their single support device, as well as their idler sheave and drive rotating about non-parallel axes and a wrap angle of at least 180° around their drive sheave.

Attention is directed to de Jong et al who teach the structure of Salmon et al with an idler sheave (8, Fig.'s 4 and 5) and their machine comprising a motor (1) and drive sheave (3). The orientation of their traction and idler sheave(s) incorporate an offset(s) with respect to their parallel axes in order to accommodate a desired frictional loading without compromising the service life of their ropes (4, Fig. 3 and Fig. 6b). Furthermore,

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de Jong et al teach their idler sheave and drive sheave positioned relative to each other so that the elongated load bearing members (4) extend vertically, deflect about the idler sheave in a generally horizontal direction and then are wrapped at least 180° around the drive sheave, whereby their idler sheave and drive sheave rotate about parallel axes.

However, though terminations at ends of elongated load bearing members for supporting an elevator cab and counterweight are known in the art, de Jong et al are silent regarding terminations.

Further consideration is directed to Orrman et al who teach their terminations (10, 11) associated with the ends of their load bearing members (9) for suspending their cab and counterweight, their terminations fixed to a common support device that secures the machine and terminations in a desired position inside the hoistway relative to their cab (2) and counterweight (4) as a "...compact package... suited for... modernization projects... and (sic) an elevator without a machine room..." (Para. 0011).

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al with the teaching of de Jong et al and Orrman et al, to provide a single support device for the machine, sheave and terminations in a 2:1 suspension arrangement for savings in space and drive capacity.

**Re: Claims 10 and 13,** Salmon et al disclose their support device includes two lateral beam members to support the machine and idler sheave, the lateral beam members are spaced apart from each other, and at least one transverse member; however, Salmon et al are silent regarding terminating members and their support.

De Jong et al disclose both lateral and transverse beam members; however, De Jong et al are silent regarding at least one termination member secured to their lateral beam members.

It is Orrman et al who teach their first and second terminations (10, 11) secured to either end of their support device, and thereby the transverse beam members of De Jong et al, to provide a single support device for the machine, sheave and terminations for operability in 2:1 roping suspensions and compactness.



**Re: Claim 14**, Salmon et al disclose their support comprise a plurality of metal beam members.

***Response to Arguments***

Applicant's arguments filed 27 June 2007 have been fully considered but are not persuasive.

With respect to applicant's arguments pertaining to **Claims 1 – 3, 6 – 9 and 22** of the previous office action, applicant's arguments are based on the amended claim language as applied to the previously cited prior art; consequently, this office action comprises a detailed response to Applicant's arguments.

Again, with respect to the preamble of reciting a support device *for* a machine-roomless elevator, as reviewed above, *intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.*

As reviewed in the previous office action, Salmon et al discloses their "...motor 10 mounted on a rather straightforward frame arrangement to a pair of beams 14 which span the elevator shaft above the car and counterweight C.W." (Col. 2, Line 15) and though they are silent as to such an arrangement comprising a "machine room", they disclose the structure and placement of the support device of the instant invention as depicted in Figures 1 – 2 and 5 – 6. Notably, the figures depict a machine-supporting portion spanning the region above the elevator car and counterweight and secured to the opposing walls of the hoistway – in keeping with the aforementioned passage from the disclosure of Salmon et al.

With respect to the inability of modifying Salmon et al with the teaching of de Jong et al, the applicant is correct that the reference of Salmon et al discloses the idler and drive sheaves having non-parallel axes in light of necessary offset to accommodate the rope pattern. De Jong et al, however, teaches the axes of the idler and drive sheaves as being parallel through an offset (T, U) in the plane of rotation of said idler sheave in relation to that of the drive sheave, while accommodating a plurality of load bearing members.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

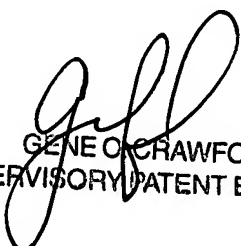
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571.272.6856. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free)

SHK

16 August 2007

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER